

PTO/SB/10 (1-99)
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STATEMENT CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) & 1.27(c))SMALL BUSINESS CONCERN	Docket Number (Optional) NPA009US
Applicant, Patentee, or Identifier: Silverbrook Research Pty Ltd Application or Patent No.: Filed or Issued: May 2000 Title: METHOD AND SYSTEM FOR DELIVERY OF A SECURE	DOCUMENT
I hereby state that I am	
NAME OF SMALL BUSINESS CONCERNSilverbrook Research Pty. Ltd. ADDRESS OF SMALL BUSINESS CONCERN393 Darling Street, Balmain, NSV	V 2041, Australia
I hereby state that the above identified small business concern qualifies as a small 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trade to size standards for a small business concern may be directed to: Small Business Adm 409 Third Street, SW, Washington, DC 20416.	emark Office. Questions related
I hereby state that rights under contract or law have been conveyed to and remain videntified above with regard to the invention described in:	with the small business concern
the specification filed herewith with title as listed above. the application identified above. the patent identified above.	
If the rights held by the above identified small business concern are not exclusive organization having rights in the invention must file separate statements as to their status to the invention are held by any person, other than the inventor, who would not qualify as 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).	s as small entities, and no right an independent inventor under
Each person, concern, or organization having any rights in the invention is listed be no such person, concern, or organization exists. — each such person, concern, or organization is listed below.	alow:
Separate statements are required from each named persorconcern or organization stating their status as small entities. (37 CFR 1.27)	having rights to the invention
I acknowledge the duty to file, in this application or patent, notification of any chan entitlement to small entity status prior to paying, or at the time of paying, the earliest of the fee due after the date on which status as a small entity is no longer appropriate. (37 CFF	he issue fee or any maintenanc
NAME OF PERSON SIGNINGKia Silverbrook	
TITLE OF PERSON IF OTHER THAN OWNER	
ADDRESS OF PERSON SIGNING 393 Darling Street, Balmain, NSW 2041, Aus	stralia
SIGNATURE DATE	May 16, 2000

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PTO/SB/01 (12-97)

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			Attorney Docket Number	er NPA009US			
DECLARA		I FOR UTILITY OR	First Named Inventor	Kia Silverbrook			
PATE		APPLICATION	COMPLETE IF KNOWN				
		FR 1.63)	Application Number				
			Filing Date				
☑ Declaration Submitted ✓	Submitted OR Submitted after Initial Filing (surcharge	Group Art Unit					
with Initial Filing		(37 ČFR 1.16 (e))	Examiner Name				

As a below named inver	tor, I hereby declare that:									
My residence, post office address, and citizenship are as stated below next to my name.										
I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:										
METHOD AND SYSTEM FOR DELIVERY OF A SECURE DOCUMENT										
the specification of which (Title of the Invention) is attached hereto										
OR was filed on (MM/D	DDYYYY)	as United	d States Applica	tion Number or PCT Internationa						
Application Number	and w	as amended on (MM/DD/Y	vvv) [(if applicable						
I hereby state that I have re amended by any amendme	eviewed and understand the	contents of the above ident	ified specificatio	n, including the claims, as						
, ,	disclose information which is		defined in 37 CF	R 1.56.						
I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.										
Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES NO						
PQ0559	Australia	05/25/1999								
PQ1313	Australia	06/30/1999								
Additional foreign applic	Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:									
I hereby claim the benefit	under 35 U.S.C. 119(e) of an	y United States provisional	application(s) lis	ted below.						
Application Number	r(s) Filing Date	e (MM/DD/YYYY)								
		Ì	Addition	onal provisional application						
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				emental priority data sheet SB/02B attached hereto.						
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[Page 1 of 2]
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Docket No.: NPA009US

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Additional inventors are being named on the 1

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Name	Kia S	Silverbrook													
Address	Silve	rbrook Rese	earch	Pty I	Ltd										
Address	393	Darling Stre	et					<u> </u>	_			Γ.			
City	Balm	ain						State	<u> </u>	NSW .	zip 2041				
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	Kia)						Silve	rbrool	K			
Inventor's Signature		CWC -						Date					May 16 2000		
Residence: (City	Balmain State NSW					sw	Count	ry	Australi	ia		Citizenship	Austra- lian	
Post Office A	ddress	393 Darling	g Stre	et											
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supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto





Docket No. NPA009US

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PTO/SB/02A (3-97)

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DECLARATION

ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

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Name of Additional Joint Inventor, if any:									entor		
Given Na)	Family Name or Surname									
Paul		Lapstun									
Inventor's Signature	Parl Date May 2000									May 16, 2000	
Residence: City	Rodd Point	State	State NSW			Australia	Citizens	hip	Norwegian		
Post Office Address	13 Duke Avenue										
Post Office Address								1			
City	Rodd Point	State	NSV	٧	ZIP	2046	Country	y Aus	Australia		
Name of Additional Joint Inventor, if any: A petition has been filed for this unsigned inventor										ventor	
Given Nar	me (first and middle [if any])				Family Nar	ne or S	Sumame			
Inventor's Signature								Da	te		
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Name of Addition	nal Joint Inventor, if an	ıy:			A petitio	n has been file	d for th	is unsigr	ned inv	entor/	
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Inventor's Signature	Date										
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In the United States Patent and Trademark Office

Docket Number: NPA009 US Application filed: 23 May 2000 Applicant: Silverbrook Research

Declaration in Support of Accompanying Petition to Make Special

In support of the accompanying Petition to Make Special, applicant declares as follows:

- 1. Silverbrook Research is the applicant in the above identified patent application.
- 2. The present invention is part of a multi-facetted effort to develop a new form of information distribution. The system, collectively called "Netpage", has the potential to substantially reduce energy use, transportation requirements, and paper use, giving environmental benefits such as reduction of carbon emissions, maintenance of biodiversity, and a reduction in pollution. These benefits fall under two reasons to make special under MPEP Sec. 708.02, as explained below.

Reason V – Enhancement of Environmental Quality

Netpage can significantly reduce the use of paper in many industries. Some examples are:

- Approximately 40% of all magazines printed remain unsold or are otherwise junked before they reach a reader. This inefficiency in inherent in the 'print and distribute' system that must be used by commercial printers due to the current absence of a viable digital home magazine printing technology. Most magazines also have many more pages than are likely to be read. Netpage allows only those pages which are of interest to the reader to be printed. This number of pages will vary from reader to reader, but may be around one quarter as many as are in current magazines. Thus, if Netpage is used for magazine distribution, the paper use may be reduced by around 90%.
- Newspapers In 1986, US newspapers used 13 million tons of paper. A
 substantial majority of newspaper pages go unread, as they are not printed
 selectively for each reader. A customized newspaper need only have a small
 fraction of the pages of a traditional newspaper, and can therefore use
 proportionally less paper.
- Direct mail the typical response rate for direct mail such as brochures and catalogs is around 2%. This means that 98% of all of the paper used in direct mail is wasted. Studies have shown that by targeting direct mail only to those who are in the appropriate demographic, the amount of paper use can be reduced to around 10% of a 'scattershot' approach. Netpage uses extensive demographic interest profiles to allow efficient delivery of direct mail to only those people who are likely to be interested.
- Netpage prints on both sides of the page simultaneously. This almost halves the amount of paper used compared to single sided printing, as is typically used with computer printers.

Reason VI – Energy Savings

The energy savings from a reduction in paper use are substantial. The primary energy cost of manufacturing paper in 1998 was around 17.8 gigaJoules per tonne [1]. Using this figure, the 13 million tons of paper used by US newspapers in 1986 would have required around 230 petaJoules to manufacture. This is equal to a continuous consumption of 7.4 gigaWatts over the year.

If the amount of paper in those newspapers was halved by using the Netpage system disclosed herein, the power savings in the US would be around 3.7 gigaWatts, equal to the output of about four full scale nuclear, coal, or natural gas electricity generating plants.

Similar energy savings can be achieved for magazines, direct mail, and other printed media.

Netpage can also operate as a 'web browser' using the interactive paper technology developed as part of this project. Most of the everyday functions of current computer based web browsers can be achieved using interactive paper, reducing the need for personal computers to operate as browsers.

The MemjetTM printing technology invented for this project has an energy consumption of around 120 nanoJoules per printed drop, compared with several microJoules per drop for thermal inkjet technologies. This dramatic reduction in energy allows a Netpage printer to consume typically less than 50 Joules to print a full color double sided sheet of paper. Unlike a computer screen, once the page is printed, there is no further energy consumption to keep the images displayed.

The Netpage printer goes into 'sleep' mode when not printing, with very low power consumption.

By comparison, estimates of the annual energy use of a household personal computer range from 130 to 262 kilowatt-hours (468 to 943 megaJoules) per year [2]. This is sufficient energy for a Netpage printer to print around 24 million pages.

However, a PC based web browser does not require sheets of paper to operate. For a balanced comparison with PCs, the energy cost of manufacturing this paper must be taken into account. An energy cost of 17.8 gigaJoules per tonne of paper equates to 53.69 kiloJoules per letter sized 50 GSM sheet. Including the 50 Joules required for a Netpage printer to print the sheet results in a total of 53.74 kiloJoules.

A magazine-quality double-sided sheet of paper can display around 10 computer screens worth of information. The time taken for someone to read 10 screens of information is approximately 10 minutes. A typical desktop personal computer consumes around 200 Watts, so 10 minutes operation results in an energy consumption of 120 kiloJoules. Therefore, the energy cost of both manufacturing the paper sheet and printing it may be around half the energy used in reading the equivalent information on a computer screen.

As computers currently consume around 2% of the entire US electricity supply [2], and as internet access is a major and growing application of computers, substantial energy savings are possible by replacing the PC with more energy efficient means of internet access.

[1] Paper Federation of Great Britain

[2] Statement of Jay E. Hakes, Administrator, Energy Information Administration, Department of Energy, before the Subcommittee on National Economic Growth, Natural Resources, and Regulatory Affairs, Committee on Government Reform, United States House of Representatives, February 2, 2000

I further declare that all statements made herein of my own knowledge are true and that all statements made upon information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application and any patent issuing therefrom.

Very respectfully,

Kia Silverbrook

Silverbrook Research 393 Darling St Balmain NSW 2041 Australia